

ABSTRACT

DETERMINING POSITIONS OF MOBILE TERMINALS USING ASSISTANCE DATA TRANSMITTED ON DEMAND

A mobile terminal (UE) comprises means (CR) for acquiring pseudo-random codes modulating signals received from positioning satellites (SN) in view belonging to a constellation (CS) and related to a reference time, and computation means (MC1-MC3) for determining its position received from the acquired codes and from navigation data contained in the signals. The acquisition means (CR), on receiving assistance data representing an approximate reference time and the approximate position of the terminal (UE), determine estimated positions of the satellites, estimated distances between the terminal and each of the satellites in view and associated Doppler effects as a function of pairs of hypotheses relating to the approximate reference time and the approximate position, and then determine a signal replica for each pair of hypotheses corresponding to the estimated positions and distances and to the associated Doppler effects over a selected time interval, and select the pair of hypotheses corresponding to the signal replica having the maximum correlation with the signal received during the time interval in order to determine the pseudo-random codes modulating the received signals.

(Figure 2)